UNITED STATES PATENT AND TRADEMARK OFFICE

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09/725,660	11/29/2000	Robert E. Zeman	81695N-R	9591

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EXAMINER
MILIA, MARK R

ART UNIT	PAPER NUMBER
2622	

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Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.		Applicant(s)
Office Action Summary	09/725,660		ZEMAN, ROBERT E.
	Examiner		Art Unit
	Mark R. Milia		2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____ .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1,2,5-8,10,12-15 and 17-20* is/are rejected.

7) ☒ Claim(s) *4,9,11 and 16* is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on *20 February 2001* is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *4 + 5*.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

Drawings

1.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4)

because reference character "450" has been used to designate both "Use software

algorithm to avoid cutting across other image cut-lines" and "Cut page according to

sequence". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required

in reply to the Office action to avoid abandonment of the application. Any amended

replacement drawing sheet should include all of the figures appearing on the immediate

prior version of the sheet, even if only one figure is being amended. The replacement

sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR

1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not

accepted by the examiner, the applicant will be notified and informed of any required

corrective action in the next Office action. The objection to the drawings will not be held

in abeyance.

Specification

2.   The disclosure is objected to because of the following informalities: No

description of Fig. 2 element (120) or Fig. 16 element (440). Appropriate correction is

required.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6104469 to Yamamoto in view of U.S. Patent No. 5859920 to Daly et al.

Yamamoto discloses a method of printing an image comprising providing digital image data representing a pictorial image to be printed on a sheet in hard copy form (see column 3 lines 10-14, column 4 lines 1-7, and column 5 lines 12-15), and providing information for cutting the sheet with the printed pictorial image (see column 5 lines 12-51).

Yamamoto does not disclose expressly employing the digital image data and the instructions for cutting the sheet to print the pictorial image on the sheet with invisible cutting instructions being printed so as to be embedded in the printed pictorial image, the invisible cutting instructions being dispersed within the pictorial image and not necessarily located at locations where cutting is to be made according to the cutting instructions.

Daly discloses a method of printing an image comprising providing digital image data representing a pictorial image to be printed on a sheet in hard copy form and employing the digital image data and the instructions for cutting the sheet to print the pictorial image on the sheet with invisible cutting instructions being printed so as to be embedded in the printed pictorial image, the invisible cutting instructions being dispersed within the pictorial image and not necessarily located at locations where cutting is to be made according to the cutting instructions (see column 5 lines 8-46).

Yamamoto & Daly are combinable because they are from the same problem

solving area, conveying instructions to support a print job.

At the time of the invention, it would have been obvious to a person of ordinary

skill in the art to combine the method of embedding digital data of Daly with the print

and trim system of Yamamoto.

The suggestion/motivation for doing so would have been to provide a system in

which cutting instructions are not easily corrupted or lost due to defects of a system in

which the image data and cutting instructions are transferred separately.

Therefore, it would have been obvious to combine Daly with Yamamoto to obtain

the invention as specified in claim 1.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over

U.S. Patent No. 6209435 to Miyazaki et al. in view of Daly.

Miyazaki discloses an apparatus for printing an image comprising a processor of

digital image data representing the pictorial image to be printed on a sheet in hard copy

form (see column 9 lines 45-53), a processor for providing digital information for cutting

the sheet (see column 9 lines 35-44 and column 10 lines 24-27), a merging processor

for merging the digital image data representing the pictorial image and the digital

information for cutting the sheet, the digital information for cutting the sheet being

encoded so as to be invisible in any print of the pictorial image (see column 9 lines 55-

59), and a printer responsive to the merged digital image data representing the pictorial

image and the digital information for cutting the sheet for printing the pictorial image and

the cutting instructions, the cutting instructions being dispersed through the print and not

being visible and not necessarily being located at positions in the pictorial image where

cuts are to be made according to the cutting instructions (see column 9 lines 35-44).

Miyazaki does not disclose expressly providing digital information for cutting the

sheet with the printed pictorial image thereon.

Daly discloses providing digital information for cutting the sheet with the printed

pictorial image thereon (see column 5 lines 8-47, reference states that the embedded

digital data may represent a number of different things and thus cutting instructions may

represent embedded digital data).

Miyazaki & Daly are combinable because they are from the same problem

solving area, conveying instructions to support a print job.

At the time of the invention, it would have been obvious to a person of ordinary

skill in the art to combine the printing apparatus of Miyazaki with the method of

embedding digital data of Daly.

The suggestion/motivation for doing so would have been to provide automatic

cutting of a printed image to occur utilizing embedded digital data which is not easily

corrupted or lost.

Therefore, it would have been obvious to combine Daly with Miyazaki to obtain

the invention as specified in claim 12.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Miyazaki in view of Daly.

Miyazaki discloses a method of printing an image comprising forming a pictorial

image having a visible border on a sheet in hard copy form (see Figs. 21(A-C) and 22)

and the cutting information representing information for cutting the sheet at locations

outward of the border (see column 1 lines 53-67 and column 2 lines 1-4).

Miyazaki does not disclose expressly forming invisible cutting information within

the pictorial image, the cutting information being present inward of the border of the

pictorial.

Daly discloses forming invisible cutting information within the pictorial image, the

cutting information being present inward of the border of the pictorial (see column 5

lines 23-28, reference states that the embedded digital data may represent a number of

different things and thus cutting instructions may represent embedded digital data and

further since the digital data is embedded in the image the cutting information is located

inward of a border around the pictorial).

Miyazaki & Daly are combinable because they are from the same problem

solving area, conveying instructions to support a print job.

At the time of the invention, it would have been obvious to a person of ordinary

skill in the art to combine the printing apparatus of Miyazaki with the method of

embedding digital data of Daly.

The suggestion/motivation for doing so would have been to provide automatic

cutting of a printed image utilizing embedded digital data which is not easily corrupted or

lost.

Therefore, it would have been obvious to combine Daly with Miyazaki to obtain

the invention as specified in claim 13.

Claims 2, 3, 5-8, and 10 are rejected under 35 U.S.C. 103(a) as being

unpatentable over the combination of Yamamoto and Daly as applied to claim 1 above.

Yamamoto discloses (*claim 3*) wherein the information for cutting represents data

that defines a center of the pictorial mage and a representation of a geometric figure or

figures that provide information relative to the locations of cutting points (see Fig. 2 and

column 5 lines 19-51), (*claim 8*) automatically positioning the pictorial image relative to a

cutting mechanism and cutting the sheet in accordance with the cutting instructions (see

column 5 lines 19-51 and column 4 line 58), and (*claim 10*) wherein the information for

cutting represents data that defines a center of the pictorial mage and a representation

of a geometric figure or figures that provide information relative to the locations of

cutting points (see column 5 lines 19-51 and Fig. 2).

Yamamoto does not disclose expressly (*claim 2*) wherein the information for

cutting is placed into digital form that is merged with processed digital image data

representing the pictorial image to be printed, (*claim 5*) a printed image formed on a

sheet and including invisible cutting instructions embedded as coded information in a

pictorial image and formed by the method of claim 1, (*claim 6*) a printed image formed

on a sheet and including invisible cutting instructions embedded as coded information in

a pictorial image and formed by the method of claim 3, (*claim 7*) a printed image formed

on a sheet and including invisible cutting instructions embedded as coded information in

a pictorial image and formed by the method of claim 4, and (*claim 8*) sensing the

embedded invisible cutting instructions.

Daly discloses (*claim 2*) wherein the information for cutting is placed into digital form that is merged with processed digital image data representing the pictorial image to be printed (see column 5 lines 12-46), (*claim 5*) a printed image formed on a sheet and including invisible cutting instructions embedded as coded information in a pictorial image and formed by the method of claim 1, (*claim 6*) a printed image formed on a sheet and including invisible cutting instructions embedded as coded information in a pictorial image and formed by the method of claim 3, (*claim 7*) a printed image formed on a sheet and including invisible cutting instructions embedded as coded information in a pictorial image and formed by the method of claim 4 (see column 5 lines 24-28 and 44-47, reference states that the embedded digital data may represent a number of different things and thus cutting instructions may represent embedded digital data) (Examiner understands claims 5-7 to be product-by-process claims and as such no recognition is given to the dependency of these claims, for further information on product-by-process claims see MPEP 2113), and (*claim 8*) sensing the embedded invisible cutting instructions (see column 5 lines 47-64).

Yamamoto & Daly are combinable because they are from the same problem solving area, conveying instructions to support a print job.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the method of embedding digital data of Daly with the print and trim system of Yamamoto.

The suggestion/motivation for doing so would have been to provide a system in which cutting instructions are not easily corrupted or lost due to defects of a system in which the image data and cutting instructions are transferred separately.

Therefore, it would have been obvious to combine Daly with Yamamoto to obtain the invention as specified in claims 2, 3, 5-8, and 10.

Claims 14-15 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Miyazaki and Daly as applied to claim 13 above, and further in view of Yamamoto.

Miyazaki discloses (*claim 18*) a sheet including a plurality of printed images formed on the sheet (see column 1 lines 53-67 and column 2 lines 1-10)

Miyazaki does not disclose expressly (*claim 14*) including automatically sensing the cutting information and cutting the sheet in accordance with the cutting instructions, (*claim 15*) wherein the cutting instructions define a center of the pictorial image and a virtual representation of a geometric figure, (*claim 18*) pictorial images include invisible cutting instructions embedded as coded information in a respective pictorial image and formed by the method of claim 17, (*claim 19*) wherein the invisible cutting instructions are dispersed within the respective pictorial image and not necessarily located at locations where cutting is to be made according to the cutting instructions.

Daly discloses (*claim 14*) including automatically sensing the cutting information (see column 5 lines 47-64), (*claim 18*) pictorial images include invisible cutting instructions embedded as coded information in a respective pictorial image and formed by the method of claim 17 (see column 5 lines 24-28 and 44-47), (*claim 19*) wherein the

invisible cutting instructions are dispersed within the respective pictorial image and not

necessarily located at locations where cutting is to be made according to the cutting

instructions (see column 5 lines 8-36).

Daly does not disclose expressly (*claim 15*) wherein the cutting instructions

define a center of the pictorial image and a virtual representation of a geometric figure

and (*claim 18*) a sheet including a plurality of printed images formed on the sheet.

Yamamoto discloses (*claim 14*) including automatically sensing the cutting

information and cutting the sheet in accordance with the cutting instructions (see

column 4 line 58 and column 5 lines 19-51), and (*claim 15*) wherein the cutting

instructions define a center of the pictorial image and a virtual representation of a

geometric figure (see Fig. 2 and column 5 lines 19-51).

(Examiner understands claim 18 to be product-by-process claims and as such no

recognition is given to the dependency of these claims, for further information on

product-by-process claims see MPEP 2113).

Miyazaki, Daly & Yamamoto are combinable because they are from the same

problem solving area, conveying instructions to support a print job.

At the time of the invention, it would have been obvious to a person of ordinary

skill in the art to combine the printing apparatus of Miyazaki with the method of

embedding digital data of Daly and the print a trim system of Yamamoto.

The suggestion/motivation for doing so would have been to provide a system in

which cutting instructions are not easily corrupted or lost due to defects of a system in

which the image data and cutting instructions are transferred separately.

Therefore, it would have been obvious to combine Yamamoto with Miyazaki and

Daly to obtain the invention as specified in claims 14-15 and 18-19.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over the

combination of Miyazaki and Daly as applied to claim 13 above.

Miyazaki discloses wherein plural pictorial images are formed on the sheet in

hard copy form (see column 1 lines 53-67 and column 2 lines 1-10).

Miyazaki does not disclose expressly the pictorial images have invisible cutting

information formed within the pictorial image.

Daly discloses the pictorial images have invisible cutting information formed

within the pictorial image (see column 5 lines 24-28 and 44-47, reference states that the

embedded digital data may represent a number of different things and thus cutting

instructions may represent embedded digital data and further since the digital data is

embedded in the image the cutting information is located within pictorial image).

Miyazaki & Daly are combinable because they are from the same problem

solving area, conveying instructions to support a print job.

At the time of the invention, it would have been obvious to a person of ordinary

skill in the art to combine the printing apparatus of Miyazaki with the method of

embedding digital data of Daly.

The suggestion/motivation for doing so would have been to provide automatic

cutting of a printed images utilizing embedded digital data which is not easily corrupted

or lost.

Therefore, it would have been obvious to combine Daly with Miyazaki to obtain the invention as specified in claim 17.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Daly in view of Miyazaki.

Daly discloses pictorial images including invisible cutting instructions embedded as coded information in a respective pictorial image and formed by the method of claim 1 (see column 5 lines 24-28 and 44-47, reference states that the embedded digital data may represent a number of different things and thus cutting instructions may represent embedded digital data).

Daly does not disclose expressly a sheet including a plurality of printed images formed on the sheet.

Miyazaki discloses a sheet including a plurality of printed images formed on the sheet (see column 1 lines 53-67 and column 2 lines 1-10).

Daly & Miyazaki are combinable because they are from the same problem solving area, conveying instructions to support a print job.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the printing apparatus of Miyazaki with the method of embedding digital data of Daly.

The suggestion/motivation for doing so would have been to provide automatic cutting of a printed images utilizing embedded digital data which is not easily corrupted or lost.

Therefore, it would have been obvious to combine Daly with Miyazaki to obtain the invention as specified in claim 20.

(Examiner understands claim 20 to be product-by-process claims and as such no recognition is given to the dependency of these claims, for further information on product-by-process claims see MPEP 2113).

Allowable Subject Matter

4.   Claims 4, 9, 11, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. To further show state of the art refer to U.S. Patent number 6331898 (Yokoi et al.).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark R. Milia whose telephone number is (703) 305-1900. The examiner can normally be reached M-F 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Coles can be reached at (703) 305-4712. The fax number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

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